WHAT IS CLAIMED IS:

1. A method of measuring a value of a bulk property of a semiconductor substrate, comprising:

providing a generation beam;

providing an analyzer beam;

focusing the generation beam and the analyzer beam on the semiconductor substrate, the generation beam generating in an area of the semiconductor substrate contacted by the generation beam a number of excess charge carriers, having a depth profile, the generated excess charge carriers reflecting the analyzer beam;

detecting a predetermined characteristic of the reflected analyzer beam, the predetermined characteristic comprising a near-surface contribution relating to a component of the analyzer beam reflected near the surface of the semiconductor substrate; and

determining the value of the bulk property from the predetermined characteristic of the reflected analyzer beam, the bulk property relating to a component of the analyzer beam reflected in an excess carrier profile region away from the surface of the semiconductor substrate,

wherein at least the near-surface contribution is eliminated from the predetermined characteristic.

2. The method of Claim 1, further comprising:

focusing another analyzer beam on the area of the semiconductor substrate, wherein the generated excess charge carriers reflect the another analyzer beam; and

detecting a predetermined characteristic of the reflected another analyzer beam,

wherein the eliminating comprises combining the reflected analyzer beam and the reflected another analyzer beam.

3. The method of Claim 2, wherein the analyzer beam and the another analyzer beam have a different wavelength.

4. The method of Claim 2, wherein the analyzer beam and the another analyzer beam have a different angle of incidence.

5. The method of Claim 3, wherein the combining the reflected analyzer beam and the reflected another analyzer beam comprises selecting either the s-wave or p-wave component of the reflected signals, the p-wave and s-wave being parallel and perpendicular components to the incident plane of the analyzer beam, respectively.

6. The method of Claim 1, wherein the eliminating comprises:

splitting the analyzer beam into a reference beam having the same wavelength as that of the analyzer beam;

creating a difference in phase of about one-eight of the same wavelength between the analyzer beam and the reference beam; and

combining the reference beam and the reflected analyzer beam.

7. The method of Claim 1, wherein the eliminating comprises:

selecting an incidence angle of the analyzer beam so as to correspond to the Brewster angle for the semiconductor substrate of the s-component of the analyzer beam; and

selecting the p-wave component of the reflected analyzer beam.

8. The method of Claim 7, wherein the selecting the p-wave component of the reflected analyzer beam comprises guiding the reflected analyzer beam through a p-wave polarizer.

9. The method of Claim 1, wherein the bulk property is the distribution of dopants introduced in the semiconductor substrate.

10. The method of Claim 1, wherein the bulk property is the defect distribution of defects present in the semiconductor substrate.

11. The method of Claim 1, wherein the generation beam and the analyzer beam are focused on substantially the same area of the semiconductor substrate.

12. The method of Claim 1, wherein the predetermined characteristic of the reflected analyzer beam is the power of the beam.

13. The method of Claim 1, wherein the predetermined characteristic of the reflected analyzer beam is the amplitude of the beam.

14. The method of Claim 1, wherein the predetermined characteristic of the reflected analyzer beam is the phase of the beam.

15. An apparatus for measuring a bulk property in a region of a semiconductor substrate having a plurality of background carriers, the apparatus comprising:

means for creating a plurality of excess carriers in a region of the substrate;

means for generating an analyzer beam, the analyzer beam impinging on the region of the substrate;

means for detecting a predetermined characteristic of the analyzer beam reflected by the plurality of excess carriers; and

means for determining the value of the bulk property from the predetermined characteristic of the reflected analyzer beam,

means for eliminating at least the near-surface contribution from the predetermined characteristic.

16. The apparatus of Claim 15, further comprising means for modulating the number of the plurality of excess carriers at a frequency that is sufficiently small to cause a majority of carriers moving out of the region to transfer by diffusion.

17. The apparatus of Claim 16, further comprising means for varying the wavelength and/or the angle of incidence of the analyzer beam.

18. The apparatus of Claim 16, wherein the means for eliminating comprises:

means for generating another analyzer beam, the frequency and/or the angle of incidence of the another analyzer beam being variable.

19. The apparatus of Claim 15, wherein the means for eliminating comprises:

means for tuning the angle of incidence of the analyzer beam so as to correspond to the Brewster angle for the semiconductor substrate of the s-component of the analyzer beam; and

means for selecting the p-wave component of the reflected analyzer beam.

20. The apparatus of Claim 15, wherein the means for eliminating comprises:

means for splitting a reference beam from the analyzer beam;

means for creating a phase difference between the reference beam and the reflected analyzer beam of about one eighth of the wavelength of the analyzer beam; and

means for combining the reference beam and the analyzer beam.

21. A method of evaluating a semiconductor substrate, comprising:

focusing a generation beam and a probe beam on the semiconductor substrate, the generation beam generating, in an area of the semiconductor substrate focused by the generation beam, a number of excess charge carriers, having a depth profile, the generated excess charge carriers reflecting the probe beam;

detecting a predetermined characteristic of the reflected probe beam, the predetermined characteristic comprising a near-surface contribution relating to a component of the probe beam reflected near the surface of the semiconductor substrate; and

removing at least the near-surface contribution from the predetermined characteristic.

22. The method of Claim 21, wherein the predetermined characteristic comprises at least one of the following: the power of the reflected probe beam, the amplitude of the reflected probe beam, or the phase of the reflected probe beam.

23. The method of Claim 21, further comprising determining a value of a bulk property of the semiconductor substrate based on the predetermined characteristic from which the near-surface contribution has been removed, the bulk property relating to a component of the probe beam reflected in an access carrier profile region away from the surface of the semiconductor substrate,

24. A method of evaluating a semiconductor substrate having a plurality of background carriers, the method comprising:

creating a plurality of excess carriers in a region of the semiconductor substrate;

focusing a probe beam on the region of the semiconductor substrate, the plurality of excess carriers reflecting the probe beam, at least part of the probe beam impinging on the region of the substrate;

detecting a predetermined characteristic of the reflected probe beam, the predetermined characteristic comprising a near-surface contribution relating to a component of the probe beam reflected near the surface of the semiconductor substrate; and

removing at least the near-surface contribution from the predetermined characteristic.

25. The method of Claim 23, further comprising determining a value of a bulk property of the semiconductor substrate based on the predetermined characteristic from which the near-surface contribution has been removed, the bulk property relating to a component of the probe beam reflected in an access carrier profile region away from the surface of the semiconductor substrate.

26. An apparatus for measuring a value of a bulk property of a semiconductor substrate, comprising:

means for providing a generation beam;

means for providing an analyzer beam;

means for focusing the generation beam and the analyzer beam on the semiconductor substrate, the generation beam generating in an area of the semiconductor substrate contacted by the generation beam a number of excess charge carriers, having a depth profile, the generated excess charge carriers reflecting the analyzer beam;

means for detecting a predetermined characteristic of the reflected analyzer beam, the predetermined characteristic comprising a near-surface contribution relating to a component of the analyzer beam reflected near the surface of the semiconductor substrate; and

means for determining the value of the bulk property from the predetermined characteristic of the reflected analyzer beam, the bulk property relating to a component of the analyzer beam reflected in an excess carrier profile region away from the surface of the semiconductor substrate,

wherein at least the near-surface contribution is eliminated from the predetermined characteristic.

27. An apparatus for evaluating a semiconductor substrate, comprising:

means for focusing a generation beam and a probe beam on the semiconductor substrate, the generation beam generating, in an area of the semiconductor substrate focused by the generation beam, a number of excess charge carriers, having a depth profile, the generated excess charge carriers reflecting the probe beam;

means for detecting a predetermined characteristic of the reflected probe beam, the predetermined characteristic comprising a near-surface contribution

relating to a component of the probe beam reflected near the surface of the semiconductor substrate; and

means for removing at least the near-surface contribution from the predetermined characteristic.